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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GREGORY SHIRIN, DANIEL M. FRASER, CHARU V.
CHAUBAL, and WOLFGANG G. GENTZSCH

Appeal 2009-006526
Application 10/662,020¹
Technology Center 2100

Decided: May 28, 2010

Before JOHN A. JEFFERY, JAY P. LUCAS, and
ST. JOHN COURTENAY III, *Administrative Patent Judges*.

LUCAS, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ Application filed September 11, 2003. The real party in interest is Sun Microsystems, Inc.

STATEMENT OF THE CASE

Appellants appeal from a final rejection of claims 1, 3 to 14, 16 to 27, and 29 to 39 under authority of 35 U.S.C. § 134(a). Claims 2, 15, and 28 are canceled. The Board of Patent Appeals and Interferences (BPAI) has jurisdiction under 35 U.S.C. § 6(b).

We affirm the rejection.

Appellants' invention relates to a grid establishment component (GEC) that automates establishment of a resource grid (*i.e.*, connects a set of slave computers to a master computer). (*See* Spec. ¶ [0002].) Computers that may connect to the resource grid are known as "grid nodes." (Spec. ¶ [0016]). Appellants' automated method of bringing grid nodes onto the resource grid involves pooling computing resources and purportedly eliminates the need for manual configuration by a network administrator. (*See* ¶¶ [0004], [0005], and [0006].) For example, in the words of Appellants:

Initially, [the grid establishment component] sends a signal to the privileged port of a grid node to cause the grid node to do a "network reboot." When the grid node performs a network reboot, it does not boot up with the operating system (if any) stored on the grid node. Rather, it boots up with an image of an operating system obtained from another component.

(Spec. ¶ [0026]).

Claim 1 and claim 4 are exemplary and are reproduced below:

1. A method comprising:

determining, by a grid establishment component, from a plurality of nodes, a set of grid nodes to include in a resource grid, wherein each grid node provides zero or more resources, and wherein each grid node has grid facilitation agent operating thereon; and

establishing, by the grid establishment component, the resource grid, wherein establishing comprises:

configuring each grid node to enable that grid node to participate as part of the resource grid, wherein configuring a grid node to enable that grid node to participate as part of the resource grid comprises:

deploying a grid participation module to the grid facilitation agent operating on the grid node, and

instructing the grid facilitation agent to run the grid participation module on the grid node to enable the grid node to participate as part of the resource grid; and

establishing one or more grid masters to manage access to the resources provided by the grid nodes, such that the resource grid formed by the grid nodes behaves as a single pool of resources accessible through the one or more grid masters.

4. A method, comprising:

determining, by a grid establishment component, from a plurality of nodes, a set of grid nodes to include in a resource grid, wherein each grid node provides zero or more resources;

establishing, by the grid establishment component, the resource grid, wherein establishing comprises:

configuring each grid node to enable that grid node to participate as part of the resource grid, wherein configuring a grid node to enable that grid node to participate as part of the resource grid comprises:

causing the grid node to execute a grid facilitation agent thereon;

deploying a grid participation module to the grid facilitation agent operating on the grid node; and

instructing the grid facilitation agent to run the grid participation module on the grid node to enable the grid node to participate as part of the resource grid; and

establishing one or more grid masters to manage access to the resources provided by the grid nodes, such that the resource grid formed by the grid nodes behaves as a single pool of resources accessible through the one or more grid masters.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Aziz	US 2003/0126265 A1	Jul. 03, 2003
Clarke	US 2004/0221038 A1	Nov. 04, 2004
		(filed April 30, 2003)

REJECTION

The Examiner rejects the claims as follows:

Claims 1, 3 to 14, 16 to 27, and 29 to 39 stand rejected under 35 U.S.C. § 103(a) for being obvious over Aziz in view of Clarke.

Appellants contend that Aziz alone, or in combination with Clarke, does not render the claimed subject matter unpatentable for failure of the references to disclose the claimed “grid facilitation agent,” the claimed “grid participation module,” and the limitation “deploying a grid participation module to the grid facilitation agent operating on the grid node,” as recited in exemplary claim 1 (Brief 10, top). The Examiner contends that each of the claims is properly rejected (Ans. 22, bottom).

We have only considered those arguments that Appellants actually raised in the Brief. Arguments that Appellants could have made but chose not to make in the Brief have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting the claims under 35 U.S.C. § 103(a). The issue specifically turns on whether Aziz discloses Appellants’ “grid facilitation agent,” the “grid

participation module,” and the limitation “deploying a grid participation module to the grid facilitation agent operating on the grid node” of claim 1.

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a preponderance of the evidence.

Disclosure

1. Appellants have invented a method, apparatus, and computer readable medium with a facilitation agent that instructs a participation module to run a node, thereby enabling the node to participate as part of the resource grid. (*See* claims 1, 14, and 27.)

Aziz

2. The Aziz reference discloses a computing grid involving virtual servers (*i.e.*, computing elements) controlled by a control plane (*i.e.*, a master processor). (*See* Abstract; ¶ [0064].)

Clarke

3. The Clarke reference discloses a method involving a network management module that instructs a software probe to enable the computing system (*e.g.*, element 120, 130, 140, or 150) to participate as part of the computing system 100. (*See* ¶¶ [0036], [0037], and [0048]; Fig. 1.)

PRINCIPLES OF LAW

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981); *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

ANALYSIS

From our review of the administrative record, we find that the Examiner presents the conclusions of obviousness on pages 3 to 16 of the Examiner's Answer. In opposition, Appellants present a number of arguments.

*Arguments with respect to the rejection
of claims 1, 3 to 14, 16 to 27, and 29 to 39
under 35 U.S.C. § 103(a)*

The Examiner finds that Clarke discloses Appellants' "facilitation agent" of claim 1 at paragraph [0049] (Ans. 19, middle). More specifically, the Examiner states that "[t]he software component that installs an agent on [Clarke's] nodes ... is equivalent to the grid [facilitation] agent and said agent on the nodes ... is equivalent to the grid participation module of the claimed invention." (*Id.*) (emphasis omitted).

Appellants argue: “[U]nlike the grid nodes of claim 1, none of the computing elements [of Aziz] have a ... facilitation agent operating thereon.” (Brief 10, top).

Appellants’ argument attacks Aziz’s disclosure (*id.*), instead of addressing the Clarke reference cited by the Examiner for disclosing the claimed “facilitation agent.” (Ans. 19, middle.) We note Appellants have argued the Clarke and Aziz references individually (*see* Brief 10, top), contrary to the teachings of *In re Keller*, cited above.

We agree with the Examiner’s conclusions of obviousness for the following reasons. We find that Appellants have invented a method, apparatus, and computer readable medium with a facilitation agent that instructs a participation module to run a node, thereby enabling the node to participate as part of the resource grid (FF#1). In comparison, the Clarke reference discloses a method involving a network management module that instructs a software probe (Appellants’ claimed “participation module”) to enable the computing system (*e.g.*, Clarke element 120, 130, 140, or 150) (“Appellants’ claimed “grid node”) to participate as part of the computing system 100 (Appellants’ claimed “resource grid”).

Regarding Appellants’ “grid facilitation agent,” the “grid participation module,” and the limitation “deploying a grid participation module to the grid facilitation agent operating on the grid node” of claim 1, we concentrate on Clarke’s preferred embodiment (*see* ¶¶ [0037] to [0069]), as cited by the Examiner in the Answer (Ans. 19, middle).

First, we read Clarke’s disclosures as bolstering the Examiner’s finding concerning the claimed “facilitation agent.” (¶¶ [0037] and [0048]). We find that Clarke’s network management module 151 is the software

(similar to Appellants’ claimed “facilitation agent”) for controlling Clarke’s software probes (Appellants’ claimed “participant module”) at the computing systems (Appellants’ claimed “grid nodes”). (*Id.*) Clarke’s network management module facilitates reporting to and from the computing systems in a similar manner as Appellants’ claimed “facilitation agent” since Clarke discloses that “[the] module . . . receives network management information from other elements [*i.e.*, software probes located in the systems] . . . and provides [a] control function to make discretionary changes.” (¶ [0037]). Clarke’s network management module receives data output by the software probes residing at Clarke’s computing systems (Appellants’ claimed “grid nodes”) to reconfigure Clarke’s computing system (*i.e.*, to “run,” as recited in claim 1, “the grid participation module on the grid node”). (*See* ¶¶ [0055], [0066], and [0068].)

Second, we read Appellants’ limitation “deploying a grid participation module to the grid facilitation agent operating on the grid node” (claim 1) as meaning installing software on the claimed “grid node.” We note that Appellants do not specifically disclose in the Specification a definition of “deploying,” as claimed, instead merely giving examples of “deploying.” (*See, e.g.*, Spec. ¶ [0038].) The Clarke reference clearly states: “[M]onitoring tools are deployed on potential grid resources.” (¶ [0049].) We recognize Clarke’s “monitoring tools” as referring to Clarke’s network management module 151 (Appellants’ claimed “facilitation agent”) and the software probes (Appellants’ claimed “participation module”). (*Id.*) We read Appellants’ claimed “deploying” step as being no different from installing software. Thus, Clarke meets the claim limitation “deploying a

grid participation module to the grid facilitation agent operating on the grid node.”

For all of the above-stated reasons Appellants’ claimed “facilitation agent,” the “participation module,” and the limitation “deploying a grid participation module to the grid facilitation agent operating on the grid node” (claim 1) read on Clarke’s disclosure of a “network management module,” “software probes,” and the deployed “monitoring tools,” respectively. Accordingly, we find no error.

Appellants further argue:

Whereas claim 1 configures a grid node by deploying grid participation module to a grid facilitation agent that is already operating on a grid node, and then instructing the grid facilitation agent to run the grid participation module, Aziz configures a computing element by simply having that computing element execute a certain boot image, which contains all of the software that the computing element will need to execute.

(Brief 11, top).

Appellants have again attacked the Clarke and Aziz references individually, contrary to the teachings of *In re Keller*, cited above. The Examiner cited Clarke for Appellants’ claimed “deploying” and “instructing” steps of exemplary method 1, and not Aziz (Ans. 19, middle). We refer Appellants’ attention to the above-stated findings of fact (FF#1 and FF#2) and the reasoning for further details on how Clarke’s disclosure meets the claim limitations. (*See supra*.)

Next, Appellants contend: “Nothing in Clarke ... discloses that the monitoring tools are in any way aware of a resource grid.” (Brief 12, bottom).

We find that Appellants' argument is not commensurate with the scope of the claim language. As the Examiner stated in the Answer, nowhere is awareness of a resource grid recited in claim 1 (Ans. 21, middle). We agree and adopt the Examiner's position that being "aware of a resource grid," as argued by Appellants, is not recited in claim 1 (*id.*). Accordingly, we find no error.

Lastly, regarding independent method claim 4, Appellants again argue the location of the claimed "facilitation agent," as argued above with respect to claim 1 (Brief 16, middle). For the same reasons as stated above regarding claim 1 (*id.*), we find no error in the rejection of claim 4.

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that the Examiner did not err in rejecting claims 1, 3 to 14, 16 to 27, and 29 to 39.

DECISION

We affirm the Examiner's rejection of claims 1, 3 to 14, 16 to 27, and 29 to 39.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

Appeal 2009-006526
Application 10/662,020

peb

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